



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/709,464 | 05/07/2004 | Ming-Che Tan | ACMP0039USA | 3463 |
| 27765 | 7590 | 09/22/2005 | | EXAMINER |
| NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION P.O. BOX 506 MERRIFIELD, VA 22116 | | | SEVER, ANDREW T | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2851 | |

DATE MAILED: 09/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|------------------------|---------------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/709,464 | TAN, MING-CHE | |
| | Examiner | Art Unit | |
| | Andrew T. Sever | 2851 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on ____.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
 5) Claim(s) ____ is/are allowed.
 6) Claim(s) ____ is/are rejected.
 7) Claim(s) 1-24 is/are objected to.
 8) Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on 07 May 2004 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. ____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 11, 16, and 18 in figure 3. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

See paragraph 19 which spans pages 6 and 7 of the specification.

Claim Objections

3. Claims 1-24 are objected to because of the following informalities: confusing use of the word projector. Appropriate correction is required.

Applicant claims that distances are measure from the “projector to the backside of the projector” and from the “projector to the front side of the projector”. Literally this means that the measurement is made from some point on the projector to where the projector casing ends on the front side and on the backside. It is clear, however, from applicant’s specification that applicant is intending to measure a distance from some point on the projector housing to a wall or other barrier in the indoor space exterior of the projector that is behind it (see paragraphs 7 and 8 of applicant’s specification) and one that is in front of it as shown for example in applicant’s figure 3 where the projector is 10 and the back side measurement is from 10 to the walls of the room 13 in the direction of 40c and the front side measurement is from 10 to the walls of the room 13 in the direction of 40A. Using the assumption that applicant intended to claim “a detecting module for detecting distances from the projector to the front side of the indoor space the projector is to project within and from the projector to the back side of said indoor space”, the claims have been examined with regards to the pertinent prior art. Similar errors were present in the other independent claims 12 and 22. Accordingly all claims are objected too either due to their dependency to claims 1, 12, and 22 or in addition for similar errors and/or grammatical errors present in the dependent claims. Appropriate correction is required and a thorough review of the claim language to assure it is in proper idiomatic English.

As will be stated in the reasons for indicating allowable mater, all independent claims using this assumption are allowable over the pertinent prior art.

Allowable Subject Matter

4. Claims 1-24 would be allowable if rewritten or amended to overcome the objections, set forth above in this Office action.
5. The following is a statement of reasons for the indication of allowable subject matter:
According to the assumption made above, applicant claims a projector which among other things measures the distance between the projector and the front and back sides of the indoor space where the projector is to project within (For example the distance between the projector and the screen mounted in the front of a room and the back wall of that same room.) This was not found in the prior art. Although it is known to use beams from projectors and other electronic devices to measure distance such as taught in US 4,954,962 to Evans, Jr. et al. in figure 1 where a device projects two beams forward and then detects the distance to various obstacles, it was not found in the prior art a device which along with the other limitations of claim 1 (and the other independent claims) as nearly as can be understood detects both the distance to the rear of the indoor space and front of the indoor space. Other examples are: US 5,114,224 to Miyamoto et al. which teaches in figure 1 a projector utilizing an infrared camera and projector 12 and 1 to track

a projection surface in front of the projection device; US 6,554,431 to Binsted et al. which teaches in figures 1-4 a similar projection set up for tracking the location of the surface to be projected on. US 5,455,647 to Fujiwara teaches in figure 1 a projector that determines the distance to a screen 1 in front of the projector for determining a non-orthogonal relation ship between the projector and the surface to be projected on in order to correct for keystone type distortions, however Fujiwara does not teach projecting to any surfaces that are in the back of the indoor space if the projection screen is considered to be mounted in the front of the indoor space. Since no prior art references were found that taught all the limitations of the independent claims including the measurements between the projector and at least the front and backs of the indoor space where the projector is to project, all claims are indicated as allowable provided the informalities outlined above are corrected for and the assumptions made in this reason for allowance are found to be correct.

6. As allowable subject matter has been indicated, applicant's reply must either comply with all formal requirements or specifically traverse each requirement not complied with. See 37 CFR 1.111(b) and MPEP § 707.07(a).

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 2005/0128437 to Pingali et al. which teaches a projector that can project on a plurality of surfaces and move about a room it does not teach adjusting a projection parameter based on measuring distances between it and the surface to be projected upon and other surfaces in the indoor space.

US 6,292,171 to Fu et al. teaches in figure 1 a system which uses laser points projected on the screen to adjust projection parameters.

US 2004/0184013 to Raskar et al. teaches in figure 1 a projection device, which utilizes among other things measurements to a projection surface to adjust parameters of an output image.

8. This application is in condition for allowance except for the following formal matters:
See above objection to the claims in paragraph 3 and objections to the drawings and specification in paragraph 1 and 2.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



AS

William Perkey
Primary Examiner